NOTES

CONFIRMATION OF THE CHROMOSOME NUMBER IN CEPHALOTACEAE AND RORIDULACEAE

Cephalotaceae (monotypic) and Roridulaceae (ditypic) are two Southern Hemisphere families of restricted distribution. *Cephalotus* is endemic to southwestern Western Australia and *Roridula* to the Cape region of South Africa. The two families share little in common apart from their being insectivorous in that they derive supplementary nitrogen from insects and other small organisms trapped by their leaves. *Cephalotus* is herbaceous and has relatively large leaves that produce pitchers, while the two species of *Roridula* are shrubby and have small leaves covered with sticky but evidently not glandular hairs.

Because of the intrinsic interest of these families as well as the taxonomic difficulties surrounding them, and because living material was available, we embarked on a cytological study and have determined the chromosome number in *Cephalotus* and one species of *Roridula*. Initially we believed that both families were unknown cytologically (Raven, 1975) but the work of Kondo (1969), Keighery (1979), and Johnson (1980), in which the base number of x = 10 was established for *Cephalotus* has now come to our attention. In addition, Kress (1970), published chromosome numbers for both *Cephalotus* and *Roridula*. Kress found $2n = 12$ in *Roridula gorgonias* and also recorded $2n = 20$ in *Cephalotus*. These numbers are here confirmed, meiotic material having been studied in the case of *Cephalotus*. Since no illustration of the chromosomes of *Roridula* has previously been published, a photograph (Fig. 1) of a metaphase spread is included here. Chromosome number and voucher information are as follows:

Cephalotus follicularis Labill. $n = 10$. Western Australia, Flinders Park, Albany, *Ornduff 8823* (UC).

Roridula gorgonias Planch. $n = 6$. South Africa, Cape, Vogelgat, Hermanus, *Williams 2790* (MO).

We thank Ion Williams, Vogelklip, Hermanus, South Africa for the seed of *Roridula*; and R.

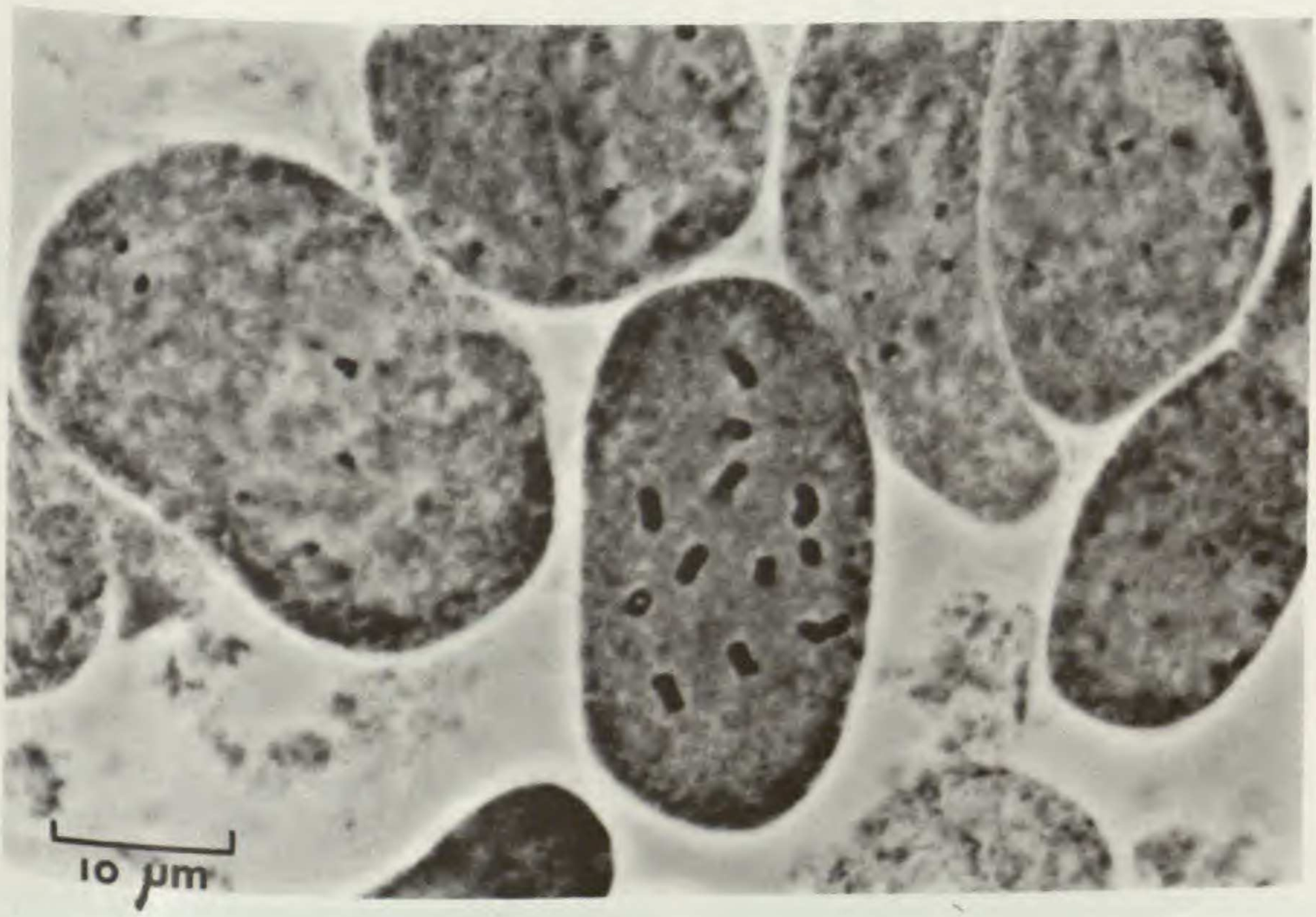

FIGURE 1. Mitotic metaphase in *Roridula gorgonias*.

Ornduff, University of California, Berkeley for providing the fixed buds of *Cephalotus*.

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A NEW *HESPEROMANNIA* (COMPOSITAE) FROM MAUI ISLAND: HAWAIIAN PLANT STUDIES 116

Hesperomannia (Compositae) consists of three species and four subspecific entities, mostly endemic to the single islands, Kauai, Oahu, Molokai, and Maui. They are attractive trees, with flower heads like large pink thistles. Now, another species has been discovered in west Maui.

Hesperomannia mauiensis sp. nov. HOLOTYPUS: Hawaiian Islands, west Maui Island, Iao Valley, Makalaloa Stream, steep forested slope, July 22, 1980, *Robert Hobdy 859* (BISH).—Fig. 1.

Diagnosis Holotypi: Arbor 2.3–3.3 m alta est, petiolis 17–30 mm longis in basi puberulis, laminis 9.5–16 cm longis 4–7.5 cm latis chartaceis ellipticis acutis varie subacuminatis cuneatis subintegribus glabris, inflorescentia terminali ascendente puberula cum 4–5 capitibus, involucro 30–32 mm alto dense ascendente puberulo, phyllariis superis lineari-lanceolatis, flosculis 30–40 luteis, corollis cum tubo 15–17 mm longo lobis 12 mm longis 0.3 mm latis extra pilosulis, antheris 7–8 mm longis, aculeis pappi 27 mm longis.

Tree 2.3–3.3 m tall; leafy branchlets 2.5–5 mm in diameter, terete, brown, densely pale ascending puberulous; leaves in a plume at the branchlet tips; internodes 2–8 mm long; nodes scarcely enlarged; leaf scars 6–7 mm wide, lunate; bundle scars 7; petioles 17–30 mm long, puberulous only at base; blades 9.5–16 cm long, 4–7.5 cm wide, stiff chartaceous, elliptic, acute to subacuminate, the base cuneate, the margins subentire but undulate, above dark green, glabrous, below green, glabrous, secondary veins 7–9 in each half, ascending, the lower ones straight, the upper arcuate; inflorescence terminal, racemose, with 4–5 heads, densely ascending puberulous; peduncle 2–5 mm long, 2.5–3 mm in diameter; pedicels 7–12 mm long; involucre 30–32 mm high, narrowly campanulate, with numerous imbricated phyllaries, these pinkish, but densely pale ascending puberulous, the lowest ones 2–3 mm long, ovate, acute, the median ones lanceolate, 3.5 mm wide, the upper ones linear lanceolate; florets 30–40, canary yellow; ovary 5.5 mm long, prismatic, puberulous; corolla tube 15–17 mm long, glabrous, the 5 lobes 12 mm long, 0.3 mm wide, almost linear, but tapering to an acute tip, sparsely pilosulous without, with a midrib; filaments 7–8 mm long; anthers 7–8 mm long, almost linear, finally splitting apart; style exserted, dark; pappus bristles 38, and 27 mm long, stramineous, mostly upwardly barbellate (mature achenes not seen).

The closest relative of this novelty is *H. arborescens* Gray ssp. *Swezeyi* (Deg.) Carlq., a plant with the blades oblanceolate (or narrowly so) or obovate, obtuse or subobtuse; all or at least the inner phyllaries glabrous; corolla tube 20 mm long, the lobes 18 mm long, 1.5 mm wide; anthers 9 mm long; and the pappus bristles 50. *Hesperomannia mauiensis* has the blades elliptic, acute to subacuminate; phyllaries all ap-